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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/049,718

DATE: 04/03/2003 ^{P.8}
TIME: 13:27:51

See p. 5

Input Set : A:\MC-SEQ-LIST.ST25.txt

Output Set: N:\CRF4\04032003\J049718.raw

3 <110> APPLICANT: Palatin Technologies, Inc.
 4 Sharma, Shubh D.
 5 Shi, Yi-Qun
 6 Yang, Wei
 7 Cai, Hui-Zhi
 9 <120> TITLE OF INVENTION: Melanocortin Metallopeptide Constructs, Combinatorial Libraries
 10 and Applications
 12 <130> FILE REFERENCE: 70025-02-US02
 14 <140> CURRENT APPLICATION NUMBER: US 10/049,718
 C--> 15 <141> CURRENT FILING DATE: 2000-02-13
 17 <150> PRIOR APPLICATION NUMBER: PCT/US00/16396
 18 <151> PRIOR FILING DATE: 2000-06-15
 20 <150> PRIOR APPLICATION NUMBER: US 60/148,994
 21 <151> PRIOR FILING DATE: 1999-08-13
 23 <160> NUMBER OF SEQ ID NOS: 69
 25 <170> SOFTWARE: PatentIn version 3.2
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 4
 29 <212> TYPE: PRT
 30 <213> ORGANISM: Artificial
 32 <220> FEATURE:
 33 <223> OTHER INFORMATION: 6-9 sequence of alpha-melanocyte stimulating hormone
 35 <400> SEQUENCE: 1
 37 His Phe Arg Trp
 38 1
 41 <210> SEQ ID NO: 2
 42 <211> LENGTH: 4
 43 <212> TYPE: PRT
 44 <213> ORGANISM: Artificial
 46 <220> FEATURE:
 47 <223> OTHER INFORMATION: Synthesized metal-binding sequence, not species derived
 49 <400> SEQUENCE: 2
 51 Gly Gly Gly Gly
 52 1
 55 <210> SEQ ID NO: 3
 56 <211> LENGTH: 4
 57 <212> TYPE: PRT
 58 <213> ORGANISM: Artificial
 60 <220> FEATURE:
 61 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific sequence
 63 <400> SEQUENCE: 3
 65 His Trp Cys Trp

66 1

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69 <210> SEQ ID NO: 4
70 <211> LENGTH: 4
71 <212> TYPE: PRT
72 <213> ORGANISM: Artificial
74 <220> FEATURE:
75 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
78 <220> FEATURE:
79 <221> NAME/KEY: MISC_FEATURE
80 <222> LOCATION: (2)..(2)
81 <223> OTHER INFORMATION: Hphe
83 <400> SEQUENCE: 4
W--> 85 His Xaa Cys Trp
86 1
89 <210> SEQ ID NO: 5
90 <211> LENGTH: 4
91 <212> TYPE: PRT
92 <213> ORGANISM: Artificial
94 <220> FEATURE:
95 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
98 <220> FEATURE:
99 <221> NAME/KEY: MISC_FEATURE
100 <222> LOCATION: (2)..(2)
101 <223> OTHER INFORMATION: 2Na1
103 <220> FEATURE:
104 <221> NAME/KEY: MISC_FEATURE
105 <222> LOCATION: (2)..(2)
106 <223> OTHER INFORMATION: Na1 2
108 <400> SEQUENCE: 5
W--> 110 His Xaa Cys Trp
111 1
114 <210> SEQ ID NO: 6
115 <211> LENGTH: 4
116 <212> TYPE: PRT
117 <213> ORGANISM: Artificial
119 <220> FEATURE:
120 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
123 <220> FEATURE:
124 <221> NAME/KEY: MISC_FEATURE
125 <222> LOCATION: (2)..(2)
126 <223> OTHER INFORMATION: Phg
128 <400> SEQUENCE: 6
W--> 130 His Xaa Cys Trp
131 1
134 <210> SEQ ID NO: 7
135 <211> LENGTH: 4
136 <212> TYPE: PRT
137 <213> ORGANISM: Artificial
139 <220> FEATURE:
140 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence

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142 <400> SEQUENCE: 7
144 His Phe Cys Trp
145 1
148 <210> SEQ ID NO: 8
149 <211> LENGTH: 5
150 <212> TYPE: PRT
151 <213> ORGANISM: Artificial
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
156 <400> SEQUENCE: 8
158 His Phe Arg Cys Trp
159 1 5
162 <210> SEQ ID NO: 9
163 <211> LENGTH: 4
164 <212> TYPE: PRT
165 <213> ORGANISM: Artificial
167 <220> FEATURE:
168 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
170 <400> SEQUENCE: 9
172 His Phe Trp Cys
173 1
176 <210> SEQ ID NO: 10
177 <211> LENGTH: 4
178 <212> TYPE: PRT
179 <213> ORGANISM: Artificial
181 <220> FEATURE:
182 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
184 <400> SEQUENCE: 10
186 Phe Gly Cys Trp
187 1
190 <210> SEQ ID NO: 11
191 <211> LENGTH: 5
192 <212> TYPE: PRT
193 <213> ORGANISM: Artificial
195 <220> FEATURE:
196 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
198 <400> SEQUENCE: 11
200 Phe His Gly Cys Trp
201 1 5
204 <210> SEQ ID NO: 12
205 <211> LENGTH: 4
206 <212> TYPE: PRT
207 <213> ORGANISM: Artificial
209 <220> FEATURE:
210 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
213 <220> FEATURE:
214 <221> NAME/KEY: MISC_FEATURE
215 <222> LOCATION: (2)..(2)

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216 <223> OTHER INFORMATION: Tle - FYI - Xaa can only represent a single amino acid.

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Input Set : A:\MC-SEQ-LIST.ST25.txt

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218 <400> SEQUENCE: 12
W--> 220 Ala Xaa Cys Trp
221 1
224 <210> SEQ ID NO: 13
225 <211> LENGTH: 4
226 <212> TYPE: PRT
227 <213> ORGANISM: Artificial
229 <220> FEATURE:
230 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
233 <220> FEATURE:
234 <221> NAME/KEY: MISC_FEATURE
235 <222> LOCATION: (2)..(2)
236 <223> OTHER INFORMATION: pF-Phe
238 <400> SEQUENCE: 13
W--> 240 Ala Xaa Cys Trp
241 1
244 <210> SEQ ID NO: 14
245 <211> LENGTH: 4
246 <212> TYPE: PRT
247 <213> ORGANISM: Artificial
249 <220> FEATURE:
250 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
253 <220> FEATURE:
254 <221> NAME/KEY: MISC_FEATURE
255 <222> LOCATION: (2)..(2)
256 <223> OTHER INFORMATION: Tyr(3',5' di-I, 4'Ac)
258 <400> SEQUENCE: 14
W--> 260 Ala Xaa Cys Trp
261 1
264 <210> SEQ ID NO: 15
265 <211> LENGTH: 5
266 <212> TYPE: PRT
267 <213> ORGANISM: Artificial
269 <220> FEATURE:
270 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
273 <220> FEATURE:
274 <221> NAME/KEY: MISC_FEATURE
275 <222> LOCATION: (1)..(1)
276 <223> OTHER INFORMATION: Bala
278 <220> FEATURE:
279 <221> NAME/KEY: MISC_FEATURE
280 <222> LOCATION: (3)..(3)
281 <223> OTHER INFORMATION: Cys(Bzl)
283 <400> SEQUENCE: 15
W--> 285 Xaa Gly Xaa Cys Trp
286 1 5
289 <210> SEQ ID NO: 16
290 <211> LENGTH: 5
291 <212> TYPE: PRT

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292 <213> ORGANISM: Artificial
294 <220> FEATURE:
295 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
298 <220> FEATURE:
299 <221> NAME/KEY: MISC_FEATURE
300 <222> LOCATION: (1)..(1)
301 <223> OTHER INFORMATION: Bala
303 <220> FEATURE:
304 <221> NAME/KEY: MISC_FEATURE
305 <222> LOCATION: (3)..(3)
306 <223> OTHER INFORMATION: Lys(TFA)
308 <400> SEQUENCE: 16
W--> 310 Xaa Gly Xaa Cys Trp
311 1 5
314 <210> SEQ ID NO: 17
315 <211> LENGTH: 5
316 <212> TYPE: PRT
317 <213> ORGANISM: Artificial
319 <220> FEATURE:
320 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
323 <220> FEATURE:
324 <221> NAME/KEY: MISC_FEATURE
325 <222> LOCATION: (1)..(1)
326 <223> OTHER INFORMATION: Bala
328 <220> FEATURE:
329 <221> NAME/KEY: MISC_FEATURE
330 <222> LOCATION: (3)..(3)
331 <223> OTHER INFORMATION: Phe(2,4-diCl)
333 <400> SEQUENCE: 17
W--> 335 Xaa Gly Xaa Cys Trp
336 1 5
339 <210> SEQ ID NO: 18
340 <211> LENGTH: 5
341 <212> TYPE: PRT
342 <213> ORGANISM: Artificial
344 <220> FEATURE:
345 <223> OTHER INFORMATION: Synthetic metal-binding melanocortin-receptor specific
sequence
348 <220> FEATURE:
349 <221> NAME/KEY: MISC_FEATURE
350 <222> LOCATION: (1)..(1)
351 <223> OTHER INFORMATION: Bala
353 <220> FEATURE:
354 <221> NAME/KEY: MISC_FEATURE
355 <222> LOCATION: (3)..(3)
356 <223> OTHER INFORMATION: Phe(2-Cl)
358 <400> SEQUENCE: 18
W--> 360 Xaa Gly Xaa Cys Trp
361 1 5
364 <210> SEQ ID NO: 19

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/049,718

DATE: 04/03/2003
TIME: 13:27:52

Input Set : A:\MC-SEQ-LIST.ST25.txt
Output Set: N:\CRF4\04032003\J049718.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; Xaa Pos. 2
Seq#:5; Xaa Pos. 2
Seq#:6; Xaa Pos. 2
Seq#:12; Xaa Pos. 2
Seq#:13; Xaa Pos. 2
Seq#:14; Xaa Pos. 2
Seq#:15; Xaa Pos. 1,3
Seq#:16; Xaa Pos. 1,3
Seq#:17; Xaa Pos. 1,3
Seq#:18; Xaa Pos. 1,3
Seq#:19; Xaa Pos. 1,3
Seq#:20; Xaa Pos. 1
Seq#:22; Xaa Pos. 1
Seq#:24; Xaa Pos. 1,2
Seq#:25; Xaa Pos. 1
Seq#:26; Xaa Pos. 1
Seq#:27; Xaa Pos. 3
Seq#:28; Xaa Pos. 1,5
Seq#:29; Xaa Pos. 1,2
Seq#:30; Xaa Pos. 1
Seq#:31; Xaa Pos. 1
Seq#:37; Xaa Pos. 1
Seq#:39; Xaa Pos. 1
Seq#:40; Xaa Pos. 1
Seq#:42; Xaa Pos. 3
Seq#:49; Xaa Pos. 1,4
Seq#:50; Xaa Pos. 1,4
Seq#:51; Xaa Pos. 1,4
Seq#:52; Xaa Pos. 1,4
Seq#:53; Xaa Pos. 1,4
Seq#:55; Xaa Pos. 2
Seq#:56; Xaa Pos. 3
Seq#:57; Xaa Pos. 3
Seq#:58; Xaa Pos. 3
Seq#:59; Xaa Pos. 3
Seq#:60; Xaa Pos. 3
Seq#:61; Xaa Pos. 3
Seq#:62; Xaa Pos. 3
Seq#:63; Xaa Pos. 1
Seq#:64; Xaa Pos. 4
Seq#:65; Xaa Pos. 4
Seq#:66; Xaa Pos. 4
Seq#:67; Xaa Pos. 4
Seq#:68; Xaa Pos. 4

RAW SEQUENCE LISTING ERROR SUMMARY
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Seq#:69; Xaa Pos. 1

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69

VERIFICATION SUMMARY

DATE: 04/03/2003

PATENT APPLICATION: US/10/049,718

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Input Set : A:\MC-SEQ-LIST.ST25.txt

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L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:85 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:130 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:240 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:478 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:588 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:718 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:752 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:772 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:811 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:920 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0
L:945 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:0
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0
L:995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0
L:1020 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:0
L:1054 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:0
L:1074 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:0
L:1094 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:0
L:1114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58 after pos.:0
L:1134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59 after pos.:0
L:1154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:0
L:1174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:0
L:1194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:0
L:1214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
L:1234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:0
L:1254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:0
L:1274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:0
L:1294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:0
L:1314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68 after pos.:0
L:1334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69 after pos.:0